

Claims 1-6, 8-14, 21, and 22 stand rejected under 35 U.S.C. § 103(a) for obviousness over the teachings of U.S. Patent No. 4,253,535 to Kleine et al. (hereinafter "Kleine") in view of the teachings of U.S. Patent No. 6,085,858 to Wakana et al. (hereinafter "Wakana"). In view of the above amendments and the following remarks, Applicant respectfully requests reconsideration of these rejections.

Claim 1, as amended, is directed to an industrial truck having a frame and a rear weight separate from the frame and connected to the frame. An internal combustion engine is mounted on the rear weight such that the rear weight is positioned between the engine and the frame such that vibrations from the engine are transmitted from the engine to the rear weight and from the rear weight to the frame.

As discussed in the present specification at pages 1 and 2, a problem with conventional industrial trucks in which the engine is mounted on the frame is that vibrations from the engine are transmitted directly to the vehicle frame and then into the driver's cab. These vibrations can be annoying to the driver. In Applicant's invention, this problem is overcome by mounting the internal combustion engine on the rear weight. Vibrations from the engine are transmitted into the rear weight, not into the frame. Because of its large mass, the rear weight is excited to vibrate only to a very small extent by the engine vibrations. Thus, vibrations transmitted to the other areas of the truck are greatly reduced due to this damping effect of the rear weight and, particularly, vibrations felt by the driver are significantly reduced.

Kleine discloses a novelty motor vehicle which, as shown particularly in Fig. 2, includes an engine 10 mounted directly on the vehicle chassis 1 (column 3, lines 1-4). A pair of weights 13 and 14 are also mounted on the chassis 1 and are spaced from the engine 10. Wakana discloses a suspension assembly in which an engine 3 is mounted on resilient

- engine mounts 4. The engine 3 is attached to the frame through a torque rod 6 (column 8, lines 30-33).

Neither Kleine nor Wakana, either alone or in combination, fairly teaches or suggests an industrial truck having a frame with a rear weight that is separate from the frame and connected to the frame and an internal combustion engine mounted on the rear weight such that the rear weight is positioned between the engine and the frame and such that vibrations from the engine are transmitted from the engine to the rear weight and from the rear weight to the frame. In Kleine, the engine 10 is mounted on the vehicle frame 1 and the weights 13 and 14 are also connected to the frame 1 at the sides of the engine. Thus, vibrations from the engine are transmitted directly into the frame. Conversely, in the present invention with the engine mounted on the rear weight, engine vibrations are transmitted directly into the rear weight since the rear weight is positioned between the engine and the frame. Wakana is directed to automobile suspensions, not industrial truck suspensions and, therefore, is completely silent about the presence of a conventional industrial truck rear weight.

In paragraph 5 of the Office Action, the Examiner states that Applicant's previous remarks were not deemed persuasive because, among other things, "...the weight itself has not been clearly defined with respect to its configuration, size, mass, and relationship to the vehicle chassis, anything could be considered a 'weight' including any structure connecting the engine to the chassis." Applicant respectfully disagrees. As set forth in amended claim 1, Applicant has positively claimed each of the frame, the rear weight, and the engine as separate elements. Additionally, Applicant has positively recited that the rear weight is separate from the frame. Therefore, Applicant believes it is clear that the rear weight is a separate element from either the frame or the engine. Moreover, the present invention is directed to an industrial truck. Conventional counterweights or "rear weights"

are well known on industrial trucks to counterbalance loads carried on the industrial truck. One of ordinary skill in the industrial truck art would understand that the rear weight is a component separate from the frame. For example, U.S. Patent No. 4,029,340 to Chelin, cited by the Examiner, discloses a conventional industrial truck having a conventional rear weight or counterweight 18 attached to the rear of the vehicle (Fig. 1 and column 2, lines 33-34). U.S. Patent No. 4,580,811 to Wykhuis et al., cited by the Examiner, discloses rear weights 52 mounted on the rear end of the vehicle, such as a mower. Additionally, Applicant encloses herewith copies of U.S. Patent Nos. 3,851,776 and 4,173,264. These references are not believed to be any more relevant than the art already of record in this case and are submitted herewith simply to further illustrate the common understanding of rear weights in the field of industrial vehicles. U.S. Patent No. 3,851,776 discloses a tracked vehicle having a digging bucket 6 mounted on a turret 3. The vehicle has a frame 1 and a counterweight 7 movably attached to the frame (column 2, lines 4-20). U.S. Patent No. 4,173,264 discloses a fork lift truck having a rear frame section 38. This patent doesn't even show the counterweight but simply states that "[a] counterweight may be mounted on rear frame section 38 behind end plate 74." Thus, Applicant believes one of ordinary skill in the industrial truck art would clearly understand that the claimed "rear weight" is different than the frame and/or the engine. Additionally, the specification at page 1, lines 16-20 specifically states that the rear weight is independent of the engine.

Therefore, for all of the above reasons, Applicant believes claim 1, as amended, is patentable over the cited prior art and is in condition for allowance. Reconsideration of the rejection of claim 1 is respectfully requested.

Claims 2-6 and 8-14 depend either directly or indirectly from, and add further limitations to, claim 1. Since claims 2-6 and 8-14 depend from a claim believed to be in condition for allowance, claims 2-6 and 8-14 are also believed to be in condition for

allowance. Additionally, claim 3 includes the limitation that the internal combustion engine is mounted on fastening means located on the rear weight such that engine vibrations are transmitted directly to the rear weight, not the frame. In Kleine, as discussed above, the engine is connected directly to the frame and, thus, vibrations from the engine would be transmitted directly to the frame. Any vibrations from the engine transmitted to the weights 13 and 14 would be through the frame, not directly from the engine. Wakana is directed to an automobile and is completely silent on the position or presence of a rear weight. Claims 6, 13, and 14 include the limitation of a torque support (shown as reference number 7 in Figs. 1 and 2) that connects the internal combustion engine with the rear weight. The Kleine engine is connected directly to the frame. Wakana specifically teaches that the engine is connected by a torque rod to the frame (column 8, lines 30-33). Claim 12 includes the limitation that the torque support extends between and is connected to both the internal combustion engine and the rear weight. Kleine is completely silent on the presence of such a torque support and the Wakana torque support connects the engine to the frame. Therefore, for all of the above reasons, Applicant believes claims 2-6 and 8-14, as amended, are patentable over the cited prior art and are in condition for allowance. Reconsideration of the rejections and allowance of claims 2-6 and 8-14 are respectfully requested.

Independent claim 21 is directed to an industrial truck having a frame, a rear weight separate from but connected to the frame, and an internal combustion engine fastened to the rear weight such that the internal combustion engine is carried on the industrial truck by the rear weight.

As discussed above, Kleine discloses a novelty vehicle in which the engine is mounted on the frame. A pair of separate weights are also mounted on the frame spaced from the engine. Wakana is directed to a vehicle suspension and does not include an industrial truck rear weight. Neither Kleine nor Wakana, either alone or in combination, fairly teaches

or suggests an industrial truck structure with an internal combustion engine fastened to a rear weight such that the internal combustion engine is carried on the industrial truck by the rear weight. In both Kleine and Wakana, the internal combustion engine is carried on the frame. Additionally, there is no teaching or suggestion in either Kleine or Wakana to attach the internal combustion engine to a rear weight such that the engine is carried on the industrial truck by the rear weight.

Therefore, claim 21, as amended, is believed patentable over the cited prior art and in condition for allowance. Reconsideration of the rejection of claim 21 is respectfully requested.

Claim 22 is directed to an industrial truck having a frame, a rear weight separate from but connected to the frame, and an internal combustion engine mounted on the rear weight by fastening means such that vibrations from the engine are transmitted to the rear weight by the fastening means and such that the engine is connected to the frame by the rear weight.

None of the cited references, either alone or in combination, teaches or suggests an industrial truck with an internal combustion engine mounted on the rear weight by fastening means such that vibrations from the engine are transmitted to the rear weight and such that the engine is connected to the frame by the rear weight. Therefore, reconsideration of the rejection of claim 22 is respectfully requested.

Claim 7 stands rejected under 35 U.S.C. § 103(a) for obviousness over the teachings of Kleine in view of the teachings of U.S. Patent No. 3,645,349 to Nichter. In view of the above amendments and the following remarks, reconsideration of this rejection is respectfully requested.

Claim 7 depends directly from claim 1 and further includes the limitation of a hydraulic unit fastened to the internal combustion engine such that the hydraulic unit and

internal combustion engine are mounted on the rear weight. Kleine has been discussed above. Nichter discloses a tractor unit having a pair of tracks 23 and 25 driven by a hydraulic system having a reservoir 43, a gasoline engine 47, and a pair of hydraulic pumps 53 and 55 (Fig. 2). Again, Nichter, either alone or in combination with Kleine, does not fairly teach or suggest an industrial truck with an internal combustion engine mounted on the rear weight. Additionally, neither of the references teaches or suggests a hydraulic unit fastened to the internal combustion engine with both the hydraulic unit and internal combustion engine mounted on the rear weight. It appears that the hydraulic system in Nichter is mounted on the underside or body of the tractor unit, not on a rear weight. Therefore, for all of the above reasons, Applicant believes claim 7, as amended, is patentable over the cited prior art and in condition for allowance. Reconsideration of the rejection of claim 7 is respectfully requested.

Claims 15-19 stand rejected under 35 U.S.C. § 103(a) for obviousness over the teachings of Kleine, Wakana, and Nichter. In view of the above amendments and the following remarks, reconsideration of these rejections is respectfully requested.

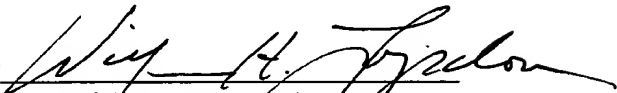
As discussed above, none of Kleine, Wakana, or Nichter, either alone or in combination, fairly teaches or suggests an industrial truck having an internal combustion engine mounted on the rear weight such that the rear weight is positioned between the engine and the frame and such that vibrations from the engine are transmitted from the engine to the rear weight and from the rear weight to the frame. Since claims 15-19 depend from claim 1 and, therefore, include this limitation, claims 15-19 are believed patentable over the cited references for substantially the same reasons as discussed above with respect to claim 1. Reconsideration of the rejections of claims 15-19 is respectfully requested.

In view of the above amendments and remarks, Applicant believes claims 1-19, 21, and 22, as amended, are patentable over the cited prior art and are in condition for

allowance. Reconsideration of the rejections and allowance of all of claims 1-19, 21, and 22 are respectfully requested.

Respectfully submitted,

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Serial No. 09/421,676
Atty. Docket No. 964-991369

Marked-Up Copy of the Claims

1. (Thrice Amended) An industrial truck, comprising:

a frame;

a rear weight [attached] separate from the frame and connected to the frame;

and

an internal combustion engine, wherein the internal combustion engine is mounted on the rear weight such that the rear weight is positioned between the engine and the frame such that vibrations from the engine are transmitted from the engine to the rear weight and from the rear weight to the frame.

21. (Twice Amended) An industrial truck, comprising:

a frame;

a rear weight separate from the frame and connected to the frame; and

an internal combustion engine fastened to the rear weight such that the internal combustion engine is carried on the industrial truck by the rear weight.

22. (Amended) An industrial truck, comprising:

a frame;

a rear weight separate from the frame and connected to one end of the frame;

and

an internal combustion engine mounted on the rear weight by fastening means such that vibrations from the engine are transmitted to the rear weight by the fastening means, and such that the engine is connected to the frame by the rear weight.